



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/212,657	12/15/1998	DAE-GYU MOON	8733.133.00	8157
30827 7590 09/08/2008 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				
EXAMINER NGUYEN, DUNG T				
ART UNIT 2871		PAPER NUMBER		
MAIL DATE 09/08/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

09/212,657

Applicant(s)

MOON, DAE-GYU

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO-83405)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____
- 7) ☐ Paper No(s)/Mail Date: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/23/2008 has been entered.
2. Applicants' amendment dated 04/21/2008 has been received and entered. Claims 27 and 33 are now pending in the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 27 and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al., US Patent No. 6,147,667, in view of Sposili et al., Single-Crystal Si-Films via a Low Substrate Temperature Excimer-Laser Crystallization Method.

Regarding claims 27 and 33, Yamazaki et al. discloses a system on panel typed liquid crystal display (LCD) device (semiconductor device)(figures 1 and 6A-6B) comprising:

- . a first glass substrate (101/631);
- . a pixel array (pixel matrix circuit 102);

- . a driver circuit (103/104);
- . a controller unit (logic circuit 105);
- . a second substrate (654);
- . a liquid crystal layer (656).

Yamazaki et al, however, neither disclose active layer of the driver circuit and/or the controller unit including an active layer in which silicon grains have a length beyond a single pulse lateral growth distance. Sposili et al. do disclose a thin film (Si-film) which used as an active layer can have a length beyond a single pulse lateral growth distance (see page 954, lines 15-16). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ the Yamazaki et al. controller to have an active layer with silicon grains have a length beyond a single pulse lateral growth distance as shown by Sposili et al in order to improve a mobility characteristic of an active layer (see Introduction).

Yamazaki et al. nor discloses the claimed invention except for a based material for an active layer being single crystalline silicon or polycrystalline silicon or an amorphous silicon. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ such single crystalline silicon or polycrystalline silicon or an amorphous instead of crystalline silicon for an active layer in the thin film transistor (TFT), since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use in a thin-film circuit.

It should be note that the limitation of “grown by single-pulse lateral growth process” recites a one-step process which does not further limit the structure of the device claims. Therefore, this limitation has not been given patentable weight.

Response to Arguments

5. Applicant's arguments filed 04/21/2008 have been fully considered but they are not persuasive.

Applicant's only arguments is that Yamazaki does not disclose the pixel matrix including TFTs having thin film of the amorphous silicon, the driver circuit includes the TFTs having thin film of the polycrystalline silicon and the logic circuit includes the TFTs having thin film of the single crystal silicon. The Examiner respectfully disagrees with Applicant's viewpoint. In particular, as stated above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ such single crystalline silicon or polycrystalline silicon or an amorphous instead of the Yamazaki's crystalline silicon for an active layer in the Yamazaki's TFTs, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use in a thin-film circuit.

Accordingly, the limitation of claim(s) 27 and (33) met.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
09/02/2008

/Dung T. Nguyen/
Dung Nguyen
Primary Examiner
Art Unit 2871